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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/721,658	11/25/2003	Patrick O'Neill	14318US02	5651

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EXAMINER	
YAARY, MICHAEL D	
ART UNIT	PAPER NUMBER
2193	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/721,658	O'NEILL ET AL.	
	Examiner	Art Unit	
	MICHAEL YAARY	2193	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 November 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,6 and 17-21* is/are rejected.

7)☒ Claim(s) *3-5 and 7-16* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/27/2007 has been entered.

2. Claims 1-21 are pending in the application.

Response to Arguments

3. Applicant's arguments filed 11/27/2007 have been fully considered but they are not persuasive.

4. Examiner respectfully disagrees with applicant arguments that: A) Chen does not disclose a "determined bank order and the difference information are transmitted to and processed by the electronic device to update memory in the electronic device; B) Chen teaches away from Kulkarni with respect to claim 1; C) It is impermissible to pick and

choose elements with respect to claim 1; and D) Teaching by Chen is unsatisfactory for Kulkarni's intended purpose with respect to claim 1.

5. With respect to argument A), the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Kulkarni discloses a system for generating difference information between a first binary image of an electronic device and a second binary image of the electronic device, wherein the difference information is transmitted to and processed by the electronic device to update memory in the electronic device (abstract; column 2, lines 35-39; and column 5, lines 51-59). The analogous art of Chen teaches a bank order determination unit to determine a bank order of updating electronic device memory comprising a plurality of banks.

By taking the teachings of Kulkarni and Chen in combination, they teach the determined bank order and difference information are transmitted to and processed by the electronic device to update memory in the electronic device, as one of ordinary skill in the art would have known to transmit the bank order along with the update difference information when making the combination of the references. Motivation can be found for

combining in that utilizing the teachings of Chen, would allow for maximizing memory usage in the updating system of Kulkarni.

6. With respect to argument B), in response to applicant's argument that Kulkarni discloses a static ordering of memory modules and Chen discloses dynamic ordering of memory modules, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). In this case, Kulkarni and Chen teach different types of memory usage. The fact that Kulkarni teaches static ordering and Chen teaches dynamic ordering does not show that the references teach away from each other. It is the two references taken in combination that disclose the instant claim 1. Chen teaches an optimized way of memory bank ordering and when taken in combination with the difference updating, as taught by Kulkarni, they teach an optimized system for updating files utilizing memory ordering; thus making obvious to one of ordinary skill in the art at the time of the invention to combine the two references.

7. With respect to argument C) in response to applicant's arguments against picking and choosing from any one reference only so much as will support a given position, one cannot show nonobviousness by attacking references individually where the rejections

are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Applicant is referred to the remarks regarding argument A in showing how the combination teaches the limitations.

8. With respect to argument D) In response to applicant's argument that there is no suggestion to combine the references, as Chen is unsatisfactory for Kulkarni's intend purpose, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Kulkarni teaches utilizing memory to update images of an electronic device and sending the update to a remote device. Chen teaches optimizing memory used for data communication by arranging the memory banks in an order and using a bank that has the minimum amount of free space as the bank for transferring network communications (column 1, lines 18-56 and column 2, lines 11-38). Thus, motivation can be found in that modifying the teachings of Kulkarni with the teachings of Chen would result in an updating system with optimized memory for the transfer of the update difference. Specific motivation to combined can be found in that Chen allows for maximum usage of memory (Chen,

column 1, lines 39-56), thus allowing for maximum usage in an updating system when taken in combination with the teachings of Kulkarni.

In addition the claims do not clearly detail who is the electronic device, i.e. the client/pda who receives the differences or the server that calculates the difference and prepares it for sending. The disputed limitation can very well be met by the server who receives a calculated difference file via a compression module and a reorder list of memory banks from the bank balancer for transmitting the difference file to the client via a determined bank of the list.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claims 1, 2, 6, 7, 18, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kulkarni et al. (hereafter Kulkarni)(US Pat. 6,775,423) in view of Chen et al. (hereafter Chen)(US Pat. 6,823,432).

Kulkarni and Chen were cited in the previous action dated 09/25/2007.

11. **As to claim 1,** Kulkarni discloses a system for generating difference information between a first binary image of an electronic device and a second binary image of the electronic device (abstract), the system comprising:

The difference information transmitted to and processed by the electronic device to update memory in the electronic device (column 2, lines 35-39 and column 5, lines 51-59).

12. Kulkarni does not disclose a bank order determination unit adapted to employ at least one differential evolution technique to determine a bank order of updating device memory comprising a plurality of banks; and the determined bank order transmitted to and processed by the electronic device to update memory in the electronic device.

However, Chen discloses a bank order determination unit adapted to employ at least one differential evolution technique to determine a bank order of updating device memory comprising a plurality of banks; and the determined bank order transmitted to and processed by the electronic device to update memory in the electronic device (Abstract and column 2, lines 11-51 disclose an analogous art where memory banks are sorted and balanced, thus ordered, in a system in order to maximize usage of the memory. Therefore, this system may be implemented in the system of Kulkarni. Chen does not explicitly teach using a differential evolution technique to determine a bank order. However, it would have been obvious to one of ordinary skill in the art to use this technique, or to choose among other well-known ordering techniques, such as a shift, bubbles, or nodes technique, to achieve the same result of an ordered memory bank.).

13. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Kulkarni, by implementing memory bank ordering, as taught in Chen, for the benefit of maximizing memory usage in the updating system without the risk of filling one particular memory bank to capacity.

14. **As to claim 2,** the combination of Kulkarni and Chen disclose wherein the first binary image and the second binary image comprise at least one of firmware and software in memory banks of the electronic device (Kulkarni column 2, lines 46-67) and the bank order determination unit being adapted to employ genomes to represent bank orders of memory banks of the electronic device (Chen column 2, lines 11-38).

15. **As to claims 6, 17, and 18,** the claims are rejected for the same rationale as claim 1 above.

16. **As to claim 21,** the combination of Kulkarni and Chen disclose incorporating information in a generated update package facilitating fault tolerant update in a mobile handset receiving the generated update package (Examiner is taking official notice that it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the well-known knowledge of fault tolerance in the system in order to allow for the electronic device to have continuous functionality while having failure of a component.).

17. Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kulkarni in view of Cheng as applied to claim 17 above, and further in view of Waldin et al. (hereafter Waldin)(US Pat. 6,651,249).

18. Waldin was cited in the previous office action dated 09/25/2007.

19. **As to claims 19 and 20,** Kulkarni and Cheng do not disclose incorporating verification information in a generated update package facilitating integrity checking in a mobile handset receiving the generated update package and incorporating authentication information in a generated update package facilitating authentication of a source of the generated update package in a mobile handset receiving the generated update package.

However, Waldin discloses incorporating verification information in a generated update package facilitating integrity checking in a mobile handset receiving the generated update package (column 10, lines 6-11) and incorporating authentication information in a generated update package facilitating authentication of a source of the generated update package in a mobile handset receiving the generated update package (column 4, lines 48-54).

13. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Kulkarni and Chen, by incorporating

verification information and authentication information, as taught by Waldin, in order to verify stability and that update packages have not been altered.

Allowable Subject Matter

20. Claims 3-5 and 7-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

21. This is a Request for continued examination of applicant's earlier Application No. 10/721,658. All claims are drawn to the same invention claimed in the earlier application and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the earlier application. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action in this case. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no, however, event will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL YAARY whose telephone number is (571)270-1249. The examiner can normally be reached on Monday-Friday, 8:00 a.m - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lewis Bullock can be reached on (571) 272-3759. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. Y./
Examiner, Art Unit 2193

/Lewis A. Bullock, Jr./
Supervisory Patent Examiner, Art Unit 2193